Files

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Frank O'Bannon
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John M. Hamilton
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100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

VIA CERTIFIED MAIL P 125 732 757

March 26, 1998

Mr. Rod Muzzarelli, Vice President
Mid-City Plating Company, Inc.
416 South Hackley Street
Muncie, Indiana 47305

Dear Mr. Muzzarelli:

Re: Closure of Container Storage Area
Mid-City Plating Company, Inc.
Muncie, Indiana
IND 006049456

The Indiana Department of Environmental Management (IDEM) acknowledges receipt of the document titled, *Response to Comments from IDEM on June 10, 1997*, dated September 7, 1997, and supporting laboratory analyses dated December 21, 1997, which were submitted on behalf of Mid-City Plating Company, Inc. (Mid-City) by Delta Compliance Consultants. IDEM has reviewed the document and laboratory analyses for technical adequacy and determined them to be deficient.

On April 18, 1995, Mid-City submitted a closure plan to IDEM for review and approval as required by Order 14 of the Agreed Order in Cause Number H-11522. The plan was for the closure of the "old chrome shop" F007/F008 cyanide residue and solution container storage area in accordance with the provisions of 40 CFR 265, Subpart G. A modified closure plan was approved by IDEM on February 13, 1996, requiring decontamination of the concrete floor of the container storage area and soil sampling. Via correspondence dated July 26, 1996, Mid-City notified IDEM that in the course of soil sampling some type of cyanide contamination had been detected. As directed by IDEM, Mid-City submitted a Source Evaluation Report on August 30, 1996. IDEM commented on the Source Evaluation Report through a letter dated September 19, 1996. Mid-City provided a response to IDEM's comments through correspondence dated November 7, 1996. IDEM commented on Mid-City's response through a letter dated June 10, 1997. Mid-City responded to IDEM's comments through submittals dated September 5, 1997, and December 21, 1997.

Since the submittal of the Source Evaluation Report on August 30, 1996, Mid-City has maintained that the source of cyanide contamination is road salt which was used on an alley near the container storage area. IDEM has thoroughly explored that conclusion through review of Mid-City's Source Evaluation Report and supporting information and, as described in the

enclosed comments, remains unconvinced that the cyanide contamination is not attributable to the container storage area or the facility.

Page 7 of the approved closure plan states, "If soil contamination is detected, the horizontal and vertical extent of contamination will be determined, and the soil will be remediated." Mid-City must continue with the performance of closure activities, most notably completing the determination of the extent of contamination as specified in the closure plan. IDEM hereby grants an extension of 180 days from receipt of this letter for the completion of closure activities.

If you have any questions or would like to meet to discuss this matter, please contact Ms. Becky Eifert at (317) 232-3404.

Sincerely,

Victor P. Windle, Chief
Hazardous Waste Permit Section
Hazardous Waste Facilities Branch
Solid and Hazardous Waste

RME

Enclosure

cc: Mr. Lloyd Wilkinson, OSHWM, IDEM
Mr. Richard Milton, OE, IDEM
File: IC1c, Delaware County ✓

Comments on Mid-City's Response to IDEM's June 10, 1997 Comments
Closure of Container Storage Area
Mid-City Plating Company, Inc.
Muncie, Indiana
IND 006049456

A. IDEM is not convinced that the soil cyanide concentrations are not attributed to the unit or the facility. IDEM has the following comments on this issue:

1. The amount of cyanide detected in the soil is dependent on the amount of waste released and degradation/dissipation with time.

2. According to the table labeled "Surficial Soil Analyses, Eastern United States" in the document titled *Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States*, U.S. Geological Survey Professional Paper 1270, surficial soils contain an average of 40 mg/kg of zinc with a range of less than 5 to 2,900 mg/kg zinc.

3. The cyanide/zinc ratio would have to account for the variation in the wastestream, the variation of zinc in the soils, and degradation of cyanide with time.

4. The pH of the soil contaminated with the waste may not be significantly increased due to dilution of the waste and degradation/dissipation with time.

5. For the cyanide to be from sodium ferrocyanide in road salt, the soil would contain approximately 10 percent sodium chloride less dissipation of the salt. The calculation is based on the road salt containing 100 ppm sodium ferrocyanide and boring 1 at 6 inches containing 21.6 ppm total cyanide.

6. A rationale has not been provided to demonstrate how a release of cyanide from the application of road salt created the cyanide contamination at soil borings 2, 3, and 4.

7. As the pH of the matrix decreases (becomes more acidic), the cyanide complex becomes less stable.

8. The following table summarizes soil sampling results. Results which are above the cleanup level are written in bold text. B6 to B9 are background borings.

Soil Cyanide results (mg/kg)				
Boring Number	6"	12"	18"	24"
1	**21.6**	**6.7**	.461	.382
2	.071	**2.8**	.752	.495
3	**.814**	**12.7**	.489	.262
4	.132	.35	.206	.171
B6	.316	.099	.143	.134
B7	.238	.255	<.050	.104
B8	.231	.06	.664	.243
B9	.372	1.3	2.72	2.43
Cleanup Level	.5	1.9	4.1	3.7

B. The laboratory analyses submitted on December 21, 1997, were reviewed and found to be deficient according to the following comments.

1. The location and sample depth were not indicated.

2. The purpose of the sample was not indicated.

3. The soil was analyzed for total cyanide and pH by methods from *Methods for Chemical Analysis of Water and Wastes* (EPA 600/4-79-020). Soil samples should not be analyzed by these methods. Analytical methods from *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846), or other analytical methods acceptable for the matrix should be used.

   Comment 6 of IDEM's September 19, 1996 letter also stated that analyses of soil samples by methods from *Methods for Chemical Analysis of Water and Wastes* (EPA 600/4-79-020), was not appropriate. Please make sure that all parties involved in the analyses of soil samples are aware of this.

4. No quality assurance/quality control (QA/QC) was provided to validate the data.